IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 10/743,417

Filed: January 3, 2004

For: AN AUTOMATED METHOD OF AND SYSTEM FOR IDENTIFYING, MEASURING AND ENHANCING CATEGORIES OF VALUE FOR A VALUE CHAIN

Group Art Unit: 3691

Examiner: Sigfried Chencinski

Brief on Appeal

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 in the November 12, 2008 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

Table of Contents

1. Real party in interest

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

2. Related appeals

An Appeal for U.S. Patent Application 09/761,670 filed on January 19, 2001 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/750,792 filed on January 3, 2004 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 11/278,419 filed on April 1, 2006 may be affected by or have a bearing on this appeal

3. Status of Claims

Claims 125 - 150 are rejected and are the subject of this appeal. Claims 1 – 124 are cancelled (they were cancelled before the first Office Action). No other claims are pending.

4. Status of Amendments

There are no amendments pending.

5. Summary of Claimed Subject Matter

One embodiment of an automated method of and system for identifying, measuring and enhancing categories of value for a value chain is best depicted in Figure 1 – 10 of the specification. Figure 1 gives an overview of the major processing steps which include preparing data for use in processing and transforming the data into a predictive model.

Independent Claim 125 - A first embodiment of the system for identifying, measuring and enhancing categories of value for a value chain is exemplified in independent claim 125 where an process uses a computer system to analyze data using a plurality of models, select a set of variables from the analyzed data using stepwise regression, refine the variable selection using an induction stage before using the best set of variables from the induction stage to develop a final model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) receiving first input data into a plurality of initial predictive models to develop an initial model

configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed - the selection of an initial data set is described in FIG 6A, reference numbers 303, 304, 305 and 306 and line 30, page 44 through line 6, page 49 of the specification;

b) receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof - the induction model stage is described in FIG. 6A, reference numbers 308, 309 and 310, FIG. 6C reference number 321 and line 24, page 49 through line 8, page 51 of the specification;

c) receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model – the development of a final predictive model is described in FIG. 6C reference numbers 347 and 348 and line 17, page 57 through line 15, page 58.

Claim 126 - The limitations associated with dependent claim 126 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 24, page 49 through line 20, page 50 of the specification.

Claim 127 - The limitations associated with dependent claim 127 are described in FIG 6A, reference numbers 303, 304, 305 and 306 and line 30, page 44 through line 6, page 49 of the specification.

Claim 128 - The limitations associated with dependent claim 128 are described in a number of places including FIG. 6B, reference numbers 325, 330 and 335 and line 25, page 38 through line 6, page 41 of the specification of cross referenced U.S. Patent Application 08/999,245.

Claim 129 - The limitations associated with dependent claim 129 are described in a number of places including FIG. 6A, reference numbers 305 and 306, and line 3, page 46, through line 8, page 46 of the specification.

Claim 130 - The limitations associated with dependent claim 130 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 30, page 48 through line 32, page 48 of the specification.

Claim 131 - The limitations associated with dependent claim 131 are described in a number of places including FIG. 6C reference numbers 347 and 348 and line 17, page 57 through line 15,

page 58.

Claim 132 - The limitations associated with dependent claim 132 are described in a number of places including line 1, page 21 through line 12, page 21 and line 29, page 73 through line 4, page 74 discusses the transformation of data. The use of the transformed data to develop predictive models is described in FIG 6A, reference numbers 303, 304, 305, 306, 308, 309, 310; FIG. 6B, reference number 321; FIG. 6C reference numbers 347 an 348; line 30, page 44 through line 8, page 51 and line 17, page 57 through line 15, page 58 of the specification

Independent Claim 133 - A second embodiment of the system for identifying, measuring and enhancing categories of value for a value chain is exemplified in independent claim 133 where a machine analyze data using a plurality of models, select a set of variables from the analyzed data using stepwise regression, refine the variable selection using an induction stage before using the best set of variables from the induction stage to develop a final model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) means for receiving, processing and storing data; The means for receiving processing and storing data is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

b) means for receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is complete, receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof and receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model - the selection of an initial data set is described in FIG 6A, reference numbers 303, 304, 305, 306, 308, 309, 310; FIG. 6B, reference number 321; FIG. 6C reference numbers 347 an 348; line 30, page 44 through line 8, page 51 and line 17, page 57 through line 15, page 58 of the specification.

c) a graphical user interface to allow a user to identify one or more data sources for said predictive modeling method, and to at least one of display, print, and save to one of a printer, a data file, and an application program using the output resulting from the final, third stage model

– the graphical user interface for identifying data sources comprise the system settings data window (701) as shown in FIG. 4 and FIG. 5, reference number 202 and as described in line 15, page 27 through line 33, page 28 of the specification. The graphical user interface for displaying, printing or saving the output from the predictive model comprise the report selection and display data window (705) as shown in FIG. 4 and FIG. 8 and the value mentor reports data window (708) as shown in FIG. 4 and FIG. 9, reference numbers 505 and 605 and as described in line 21, page 68 through line 20, page 72 of the specification.

Claim 134 - The limitations associated with dependent claim 134 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 24, page 49 through line 20, page 50 of the specification.

Claim 135 - The limitations associated with dependent claim 135 are described in FIG 6A, reference numbers 303, 304, 305 and 306 and line 30, page 44 through line 6, page 49 of the specification.

Claim 136- The limitations associated with dependent claim 128 are described in a number of places including FIG. 6B, reference numbers 325, 330 and 335 and line 25, page 38 through line 6, page 41 of the specification of cross referenced U.S. Patent Application 08/999,245.

Claim 137 - The limitations associated with dependent claim 137 are described in a number of places including FIG. 6A, reference numbers 305 and 306, and line 3, page 46, through line 8, page 46 of the specification.

Claim 138 - The limitations associated with dependent claim 138 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 30, page 48 through line 32, page 48 of the specification.

Claim 139 - The limitations associated with dependent claim 139 are described in a number of places including FIG. 6C reference numbers 347 and 348 and line 17, page 57 through line 15, page 58.

Independent Claim 140 - A third embodiment of the system for identifying, measuring and enhancing categories of value for a value chain is exemplified in independent claim 140 where an article of manufacture instructs a computer system to analyze data using a plurality of models, select a set of variables from the analyzed data using stepwise regression, refine the variable selection using an induction stage before using the best set of variables from the induction stage to develop a final model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 16, page 15 through line 4, page 17 of the specification.

a) receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed - the selection of an initial data set is described in FIG 6A, reference numbers 303, 304, 305 and 306 and line 30, page 44 through line 6, page 49 of the specification;

b) receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof - the induction model stage is described in FIG. 6A, reference numbers 308, 309 and 310, FIG. 6C reference number 321 and line 24, page 49 through line 8, page 51 of the specification;

c) receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model – the development of a final predictive model is described in FIG. 6C reference numbers 347 and 348 and line 17, page 57 through line 15, page 58.

Claim 141 - The limitations associated with dependent claim 141 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 24, page 49 through line 20, page 50 of the specification.

Claim 142 - The limitations associated with dependent claim 142 are described in FIG 6A, reference numbers 303, 304, 305 and 306 and line 30, page 44 through line 6, page 49 of the specification.

Claim 143 - The limitations associated with dependent claim 128 are described in a number of places including FIG. 6B, reference numbers 325, 330 and 335 and line 25, page 38 through line 6, page 41 of the specification of cross referenced U.S. Patent Application 08/999,245.

Claim 144 - The limitations associated with dependent claim 144 are described in a number of places including FIG. 6A, reference numbers 305 and 306, and line 3, page 46, through line 8, page 46 of the specification.

Claim 145 - The limitations associated with dependent claim 145 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 30, page 48 through line 32, page 48 of the specification.

Claim 146 - The limitations associated with dependent claim 139 are described in a number of places including FIG. 6C reference numbers 347 and 348 and line 17, page 57 through line 15, page 58.

Claim 147 - The limitations associated with dependent claim 147 are described in a number of places including line 33, page 19 through line 22, page 20 of the specification.

Claim 148 - A fourth embodiment of the system for identifying, measuring and enhancing categories of value for a value chain is exemplified in claim 148 where an article of manufacture uses the article of manufacture of claim 140 to instruct the machine of claim 133 to complete the method of claim 125 which comprises instructing a computer system to analyze data using a plurality of models, select a set of variables from the analyzed data using stepwise regression, refine the variable selection using an induction stage before using the best set of variables from the induction stage to develop a final model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed above under the discussion of claim 125, claim 133 and claim 140.

Claim 149 - The limitations associated with dependent claim 149 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 24, page 49 through line 20, page 50 of the specification.

Claim 150 - The limitations associated with dependent claim 150 are described in a number of places including FIG. 6A, reference numbers 308 and 309 and line 30, page 48 through line 32, page 48 of the specification.

6. Grounds of rejection to be reviewed on appeal

Issue 1 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are obvious under 35 U.S.C. 103(a) given U.S. Patent 5,812,988 (hereinafter, Sandretto) in view of U.S. Patent 5,361,201 (hereinafter, Jost)?

Issue 2 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, and/or claim 132 have utility and represent patentable subject matter under 35 U.S.C. 101?

Issue 3 - Whether claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 have utility under 35 U.S.C. 101?

Issue 4 - Whether claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 have utility under 35 U.S.C. 101?

Issue 5 - Whether claim 148, claim 149 and claim 150 have utility under 35 U.S.C. 101?

Issue 6 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are enabled under 35 U.S.C. 112, first paragraph?

Issue 7 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are indefinite under 35 U.S.C. 112, second paragraph?

7. The Argument

Grouping of Claims

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

Issue 1 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable under 35 U.S.C. 103(a) given U.S. Patent 5,812,988 (hereinafter, Sandretto) in view of U.S. Patent 5,361,201 (hereinafter, Jost)?

The claims are patentable because the cited documents fail to establish a prima facie case of obviousness, because the claim rejections fail to meet the requirements of the APA and because the claim rejections are non statutory.

Reason #1 - The first reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is the cited documents fail to establish a prima facie case of obviousness because they do not teach or suggest one or more of the limitations for every rejected claim. *"When determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires*

a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Limitations not taught or suggested by the cited prior art are detailed below:

a) Claims 125 and 140, (affects claims 126 – 132 and claims 141 - 147). Limitations not taught or suggested include:

1) receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed,

2) receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof;

3) receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model,

4) where all input data represents a physical object or substance,

5) where said final predictive model supports a regression analysis.

b) Claims 133 and 148 (affects claims 134 – 139 and claims 149 - 150). Limitations not taught or suggested include:

1) receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed,

2) receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof;

3) receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model,

4) where all input data represents a physical object or substance,

5) where said final predictive model supports a regression analysis

6) a graphical user interface to allow a user to identify one or more data sources for said predictive modeling method, and

7) a graphical user interface to allow a user to at least one of display, print, and save the output resulting from the final model

c) Claims 126, 134 and 141. Limitations not taught or suggested include:

1) a second model stage that comprises an induction algorithm that receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output.

d) Claim 127, 135 and 142. Limitations and activities not taught or suggested include:

1) an input data set obtained from an initial model configuration that comprises the input data to said initial model configuration after training and model selection is complete.

e) Claims 128, 136 and 143. Limitations and activities not taught or suggested include:

1) using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize a predictive model output value for a single criteria or multiple criteria.

f) Claims 129, 137 and 144. Limitations and activities not taught or suggested include:

1) wherein an initial predictive model is selected from the group consisting of CART; projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; MARS; linear regression; and stepwise regression.

g) Claims 130, 138, 145 and 150. Limitations and activities not taught or suggested include:

1) wherein an induction model is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

h) Claims 131, 139 and 146. Limitations and activities not taught or suggested include:

1) wherein the use of a tournament to select a predictive model type eliminates a need for multiple processing stages.

i) Claim 132. Limitations and activities not taught or suggested include:

1) wherein the final predictive model comprises a transform predictive model.

Reason #2 – The second reason the claims are patentable is that Sandretto and Jost fail to establish a prima facie case of obviousness for claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim

147, claim 148, claim 149 and claim 150 by teaching away from all claimed methods and limitations. MPEP § 2141.02 states that: "*in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious.*" Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Examples of Sandretto and Jost teaching away from the claimed invention include:

1) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) teach and rely on a method for developing models without relying on the adjustment of a single input variable,

Sandretto teaches away by teaching a model development method that completely relies on the adjustment of an input variable to model relationships between the value of items in a portfolio and a total portfolio value (see Sandretto, Column 3, Line 21 through Line 25).

2) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) teach and rely on a method that can develop models without adjustment the weight assigned to a single input variable,

Jost teaches away by teaching a model development method that completely relies on the adjustment of variable weights to identify relationships between items in a property and a property value (see Jost, Column 7, Line 21 through Line 39).

3) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) describe the transformation of data representative of a physical object into models that have utility in business forecasting, keyword relevance determination and performance management.

Sandretto teaches away by teaching the use of a process that only iterates data provided by a user and does not transform data into a vector or model (see Sandretto, Column 3, Line 21 through Line 37).

4) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) describe a three stage, element level model.

Jost teaches away by teaching a single stage item level model development method (see Jost, Column 7, Line 21 through Line 45)

5) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) describes a model development method that uses a series of models to identify the previously unknown impact of one or more elements on an output.

Sandretto teaches away by teaching that the output of each asset of a firm or portfolio is a known function of economic variables (see Sandretto, abstract and Column 9, L 20 through L 25).

6) Claims 128, 136 and 143 teach using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms.

Jost teaches away by teaching a method that does not utilize genetic algorithms to evolve a predictive model (see Jost, Column 10, Line 9 through Line 20).

7) Claims 125, 133, 140 and claim 148 (affects claims 126 – 132, 134 – 139, claims 141 – 147 and claims 149 - 150) describe a three stage, element level model.

Sandretto teaches away by teaching a single stage item level model (see Sandretto, FIG. 3).

8) Claims 129, 137 and 144 teach that an initial predictive model is selected from the group consisting of CART; projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; MARS; linear regression; and stepwise regression.

Jost teaches away by teaching the use of a neural network model as the initial (and only) predictive model (see Jost, abstract, Column 7, Line 21 through Line 39).

Reason #3 - The third reason claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is the fact that the Examiner has not been able to explain how or why the Jost and Sandretto inventions would be modified to replicate the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).'* "In spite of this well known requirement, the Examiner has not explained how or why modification of Jost and Sandretto should be made in spite of numerous reasonable requests that the Examiner provide such an explanation. The

inability to explain how the teachings of a patent (that teach those of average skill in the art how to make and practice their inventions) should be modified provides evidence that those authoring the November 12, 2008 Office Action do not possess the average level of skill in the art required to examine a patent or author valid written description or claim rejections.

Reason #4 - The fourth reason the claims are patentable is that the cited document fails to establish a prima facie case of obviousness for claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 because the unspecified modification would have to change one or more of the principles of operation of the invention disclosed in Sandretto and destroy its ability to function. It is well known that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". It is also well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. Changes in operating principle required to enable Sandretto to replicate the functionality of the claimed invention include:

1) Sandretto teaches and relies on the principle that: input variables need to be adjusted to model relationships between the value of items in a portfolio and an overall portfolio value (see Sandretto, abstract and Column 9, L 20 through L 25). The Examiner has proposed modifying Sandretto to render obvious an invention that teaches and relies on the principle that models can be developed without adjusting the value of any input variables. The Appellant notes that this modification would only be possible if the principles of operation of the Sandretto invention were changed. Because adjusting input variable values is the only mechanism used by Sandretto for creating a model, this change would destroy the ability of the Sandretto invention to function.

	Sandretto	10/743,417
Modeling principle	Adjust input variable values (see Column 3, Line 21 through Line 25)	Develop models without adjusting input variable values

Because a change in the principle of the operation of the Sandretto invention is required to enable the invention to replicate the functionality of the claimed inventions, the teachings of the document are not sufficient to render the claims prima facie obvious.

The Appellant notes that there are still other changes in the principle of operation of the inventions described by the cited document that would be required to replicate the claimed invention.

Reason #5 - The fifth reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that the assertions regarding the alleged obviousness of the rejected claims are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of PTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that discussion in the preceding paragraphs (see Reason #1, #2, #3 and #4) clearly shows that the instant Office Action fails to provide even a scintilla of evidence to support the allegation that the claims are obvious and that as a result it fails to meet the substantial evidence standard.

The Appellant respectfully submits that the obviousness rejection of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 also fails to pass the arbitrary and capricious test because as detailed above under Reason #1, Reason #2 and Reason #4 the Examiner has provided substantial evidence that all the rejected claims are new, novel and non-obvious. Furthermore, there is no rational connection between the allowance and issue of U.S. Patent 7,283,982 (hereinafter, Pednault) and the rejection of the claims in the instant application for obviousness. Pednault described a similar model development method in an application with a priority date several years after the priority date of the above referenced application. The documented pattern of arbitrarily and capriciously issuing patents to large companies for inventions similar to those described in the earlier filed applications of the Appellant can also be observed in the related appeals for applications 09/761,670, 10/750,792 and 11/278,419.

Reason #6 - The selection of the Sandretto and Jost documents in an attempt to support an obviousness rejection provides substantial evidence that those authoring the November 12, 2008 Office Action for the instant application appear to lack the level of skill in the art required to

author a rejection for obviousness, lack of utility and/or for an alleged written description deficiency. The latter statement was made because it is well established that the "hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art." Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). No one who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Sandretto and/or Jost as a reference in an obviousness rejection for the claimed inventions (see Reason #1, Reason #2 and Reason #4). The documented pattern of citing prior art and/or using technical reasoning that appear to provide evidence that those authoring the November 12, 2008 Office Action lack an average level of skill in the pertinent arts can also be observed in the related appeals for applications 09/761,670, 10/750,792 and 11/278,419. The sixth reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that there is no statutory basis for giving any weight to claim rejections for obviousness authored by individuals who appear to have a level of skill in the relevant arts that is not average or better.

Issue 2 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, and/or claim 132 have utility and represent patentable subject matter under 35 U.S.C. 101?

The Appellant respectfully traverses the rejections for a lack of utility and non statutory subject matter in four ways. First, by noting that the November 12, 2008 Office Action has failed to establish a prima facie case of non-statutory subject matter and lack of utility. Second, by noting that the claim rejections are non-statutory. Third, by noting that the claim rejections fail under both standards of the APA. Fourth, by noting that the claimed invention clearly meets the legal requirements for statutory subject matter.

Reason #1 - The first way the Assignee will traverse the rejection of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 under 35 U.S.C. §101 is by noting that the Examiner has failed to establish a prima facie case of non utility and non statutory subject matter. *MPEP 2164.07 states "the examiner has the initial burden of challenging an asserted utility. Only after the examiner has provided evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant to provide rebuttal evidence sufficient to convince one of ordinary skill in the art of the invention's asserted utility. In re Brana, 51 F.3d 1560, 1566, 34 USPQ2d 1436, 1441 (Fed. Cir.*

1995) (citing In re Bundy, 642 F.2d 430, 433, 209 USPQ 48, 51 (CCPA 1981)). The Assignee notes that the complete absence of evidence to support the conclusory statement that the claimed invention lacks utility makes it clear that the Examiner has not met the burden required to establish a prima facie case of non utility.

The rejection of the same claims for non statutory subject matter also fails to establish the required prima facie case. As noted in MPEP 2106 "*the burden is on the USPTO to set forth a prima facie case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.(See, e.g., In re Nuitjen, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)).* In spite of this well known requirement, the Examiner has made unsupported conclusions regarding patentability without providing the required explanation. In particular the Examiner has failed to explain why the claims are non statutory after considering the fact that the Supreme Court has specifically stated *"[a] process may be patentable irrespective of the particular form of the instrumentalities used" (Cochrane v. Deener, 94 U. S. 780)* and in light of the fact that the Supreme Court and the CAFC (Bilski) have both found the transformation of data regarding real world activities and/or objects into a different state or thing to be statutory subject matter. In short, the complete absence of an explanation leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

Reason #2 - The second way the Assignee will traverse the 35 U.S.C. §101 rejections of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 is by noting that the assertions regarding the alleged lack of utility are non statutory. It is well established that *"an applicant's assertion of utility creates a presumption of utility that will generally be sufficient to satisfy the utility requirement of 35 U.S.C. 101. See, e.g., In re Jolles, 628 F.2d 1322, 206 USPQ 885 (CCPA 1980); In re Irons, 340 F.2d 974, 144 USPQ 351 (CCPA 1965); In re Langer, 503 F.2d 1380, 183 USPQ 288 (CCPA 1974); In re Sichert, 566 F.2d 1154, 1159, 196 USPQ 209, 212-13 (CCPA 1977)*". The application specification asserts that the claimed process produces models that have utility in analyzing, modeling and managing entities that physically exist (i.e. an organization and its elements of value) and there is no statutory basis for giving any weight to a conclusory statement that the claimed invention lacks utility and/or is subjective. This is particularly true when the conclusory statement has been authored by individuals with a level of skill in the art that is not average or better.

Reason #3 - The third way the Assignee will traverse the §101 rejections of claim 125, claim

126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 is by noting that the assertions regarding the alleged lack of utility are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings of fact are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Assignee submits that the 35 U.S.C. §101 rejection of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 fails under both standards. It fails under the substantial evidence standard because as detailed above under Reasons # 1 and #2 because no evidence was presented. The claim rejections also fail under the arbitrary and capricious standard for a number of reasons including:

a) there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of U.S. Patent 7,283,982 (hereinafter, Pednault) for an invention that completes a similar model development method and the rejection of claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 for being subjective, non statutory and/or for allegedly lacking utility.

Summary of ARI 10/743,417	Summary of Pednault
1) select variables using stepwise regression; 2) summarize the variables and pick the best set of summaries using cross validation; and 3) use the best set of summaries in a plurality of models and selects the best model using the root mean squared error algorithm.	1) select variables using stepwise regression; 2) summarize the variables and pick the best set of summaries using holdout or cross validation; and 3) use the best set of summaries in a model.

The documented pattern of arbitrarily and capriciously rejecting the Appellant's claims that are similar to the claims in patents issued to large companies for allegedly being non-statutory and/or lacking utility can also be observed in related appeals for applications 09/761,670, 10/750,792 and 11/278,419.

Reason #4 – The fourth reason claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131 and claim 132 are patentable is that the claimed invention is process that instructs a computer system to transform data representative of things that physically exist into a different state or thing: a predictive model. The model has utility in identifying keyword relevance measures, completing forecasts, analyzing performance and simulating the impact of changes. As noted in the Interim Guidelines for Examination of Patent Applications for Patent

Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id.* Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data must represent an object or substance that physically exists.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the transformation test and that the claims describe a process that supports a number of practical applications with substantial, specific utilities and that it therefore represents statutory subject matter.

Issue 3 - Whether claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 have utility under 35 U.S.C. 101?

The Appellant respectfully traverses the rejections for a lack of utility in four ways. First, by noting that the November 12, 2008 Office Action has failed to establish a prima facie case of a lack of utility. Second, by noting that the claim rejections are non-statutory. Third, by noting that the claim rejections fail under both standards of the APA. Fourth, by noting that the claimed invention clearly meets the legal requirements for statutory subject matter.

Reason #1 - The first reason claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 are patentable is Reason #1 listed under Issue 2.

Reason #2 - The second reason claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 are patentable is Reason #2 listed under Issue 2.

Reason #3 - The third reason claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 are patentable is Reason #3 listed under Issue 2.

Reason #4 – The fourth reason claim 133, claim 134, claim 135, claim 136, claim 137, claim 138 and claim 139 are patentable is that the claimed invention is a machine that transforms data

representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a predictive model. The model has utility in identifying keyword relevance measures, completing forecasts, analyzing business performance and simulating the impact of changes to the business. As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6)*. In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id.* Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data must represent an object or substance that physically exists.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the transformation test and that the claims describe a machine that supports a number of practical applications with substantial, specific utilities and that it therefore represents statutory subject matter.

Issue 4 - Whether claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 have utility under 35 U.S.C. 101?

The Appellant respectfully traverses the rejections for a lack of utility in four ways. First, by noting that the November 12, 2008 Office Action has failed to establish a prima facie case of a lack of utility. Second, by noting that the claim rejections are non-statutory. Third, by noting that the claim rejections fail under both standards of the APA. Fourth, by noting that the claimed invention clearly meets the legal requirements for statutory subject matter.

Reason #1 - The first reason claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 are patentable is Reason #1 listed under Issue 2.

Reason #2 - The second reason claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 are patentable is Reason #2 listed under Issue 2.

Reason #3 - The third reason claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 are patentable is Reason #3 listed under Issue 2.

Reason #4 – The fourth reason claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146 and claim 147 are patentable is that the claimed invention is an article of manufacture that instructs a computer to transform data representative of things that physically exist into a different state or thing: a predictive model. The model has utility in identifying keyword relevance measures, completing forecasts, analyzing performance and simulating the impact of changes to the business. As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id.* Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data must represent an object or substance that physically exists.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the transformation test and that the claims describe an article of manufacture that supports a number of practical applications with substantial, specific utilities and that it therefore represents statutory subject matter.

Issue 5 - Whether claim 148, claim 149 and claim 150 represent have utility 35 U.S.C. 101?

The Appellant respectfully traverses the rejections for a lack of utility in four ways. First, by noting that the November 12, 2008 Office Action has failed to establish a prima facie case of a lack of utility. Second, by noting that the claim rejections are non-statutory. Third, by noting that the claim rejections fail under both standards of the APA. Fourth, by noting that the claimed invention clearly meets the legal requirements for statutory subject matter.

Reason #1 - The first reason claim 148, claim 149 and claim 150 are patentable is Reason #1 listed under Issue 2.

Reason #2 - The second reason claim 148, claim 149 and claim 150 are patentable is Reason #2 listed under Issue 2.

Reason #3 - The third reason claim 148, claim 149 and claim 150 are patentable is Reason #3 listed under Issue 2.

Reason #4 – The fourth reason claim 148, claim 149 and claim 150 are patentable is that the claimed invention is an article of manufacture that instructs a computer to transform data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a predictive model. The model has utility in identifying keyword relevance measures, completing forecasts, analyzing business performance and simulating the impact of changes to the business. As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id.* Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data must represent an object or substance that physically exists.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the transformation test and that the claims describe an article of manufacture that supports a number of practical applications with substantial, specific utilities and that it therefore represents statutory subject matter.

Issue 6 - Whether claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147,

claim 148, claim 149 and claim 150 are enabled under 35 U.S.C. 112, first paragraph?

The claims are patentable because the arguments in the November 12, 2008 Office Action fail to establish a prima facie case of a lack of enablement, because the claim rejections fail to meet the requirements of the APA and because the claim rejections are non statutory.

Reason #1 - The first reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that the Examiner has failed to establish a prima facie case that the specification does meet the enablement requirements of §112 first paragraph. *"A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should:*

(A) Identify the claim limitation at issue; and

(B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description."

The arguments presented in the November 12, 2008 Office Action fail to establish the prima facie case required to sustain a §112 first paragraph rejection for a single claim in at least three ways:

1. No evidence has been presented. As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented about a specific concern regarding the specification;

2. No claim limitation(s) at issue have been identified. The Examiner has expressed vague concerns regarding the specification but no specific claim limitations have been identified as being at issue; and

3. Relevant evidence has been ignored. Evidence that the Examiner has apparently ignored includes:

a) the summary of claimed subject matter; and

b) the declarations submitted in support of this application, the declaration represents the only known independent review of the patent specification by someone with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill.

Although the expert providing the declaration has considerable expertise in the development of models of real world entities, the Examiner has apparently chosen to ignore the contents of this declaration which states *"Specifically, U.S. Patent Application 10/746,673 together with the patent applications and patents it cross-references fully describes a performance model that quantifies and impact of a plurality of elements and sub-elements of value on a value of a business by category of value where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof (see pages 60 - 62, Evidence Appendix)*. Application 09/940,450, the parent of the instant, continuation application, is the cross referenced application that contained the complete description of the performance model. The performance model comprises a model of market sentiment and models of current operation performance by component of value that are developed using the modeling method claimed in the instant application.

Since the prima facie case to support the claim rejections has not been established, no rebuttal was (or is) required.

Reason #2 - The second reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that the assertions regarding the alleged lack of enablement in the written description are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of PTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that the arguments presented in the November 12, 2008 Office Action fail to meet both standards. As detailed under Reason #1, these arguments fail under the substantial evidence standard because vague allegations do not constitute evidence of a written description deficiency.

The Appellant respectfully submits that the arguments presented in the November 12, 2008

Office Action also fail under the arbitrary and capricious standard. There are several reasons that the written description rejections presented in the November 12, 2008 Office Action fail under this standard:

1) there is no rational connection between the decision to reject claims on the basis of a written description rejection contained in the November 12th Office Action and the agency's prior fact-findings that have documented the fact that those authoring/signing the Office Action:

a) have been unable to explain how or why a single combination of the cited prior art should be made,

b) have been unable to explain how or why a single modification of the cited prior art should be made, and

c) do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art"

2) there is no rational connection between the decision to reject claims on the basis of a written description rejection contained in the November 12th Office Action and the agency's fact-findings for related appeals 09/761,670, 10/750,792 and 11/278,419 that have documented the fact that those authoring/signing the Office Action do not appear to have the capability of understanding the scientific and engineering principles applicable to a variety of pertinent arts including: mathematical modeling, networks, value analysis, value management and/or value optimization. The prior factfindings have also revealed that those authoring/signing the Office Action have previously found Appellant's methods to be subjective even when they are clearly more objective than similar methods detailed in hundreds of allowed patents for large companies.

3) there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of U.S. Patent 7,283,982 (hereinafter, Pednault) for an invention that completes a similar model development method and the rejection of the instant application allegedly describing a method that is too subjective.

Summary of ARI 10/743,417	Summary of Pednault
1) select variables using stepwise regression; 2) summarize the variables and pick the best set of summaries using cross validation; and 3) use the best set of summaries in a plurality of models and selects the best model using the root mean squared error algorithm.	1) select variables using stepwise regression; 2) summarize the variables and pick the best set of summaries using holdout or cross validation; and 3) use the best set of summaries in a model.

The rejections appear to be completely arbitrary when one considers the fact that the Asset Reliance specification identifies the specific structures used to complete the model development process (i.e. specific predictive models and specific induction algorithms) while Pednault relies

on "any of a variety of linear regression methods" and "any technique to develop a basic model". The documented pattern of arbitrarily and capriciously rejecting the Appellant's claims that are similar to the claims in patents issued to large companies for allegedly being subjective or lacking a clear description can also be observed in related appeals for applications 09/761,670, 10/750,792 and 11/278,419.

In short, because there is no rational connection between the agency's prior fact-findings and the claim rejections, the written description rejection for the listed claims would also fail under the arbitrary and capricious standard.

Reason #3 - It is well established that the "hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art." Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). No one who understood the scientific and engineering principles applicable to the pertinent art would ever suggest that an invention that relies on weights obtained from a predictive model created by using stepwise regression, induction, cross validation and the mean squared error algorithm to analyze a validated set of data, such as the one described in the rejected claims, was arbitrary or subjective. Taken together with the apparently random selection of prior art references (see Issue #1), the November 12, 2008 Office Action contains substantial evidence that those authoring the Office Action do not possess the level of skill in the art required to author a valid written description rejection. In spite of this, the November 12, 2008 Office Action for the above referenced application contained an unsupported allegation that the disclosed process was arbitrary and subjective. The third reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that there is no statutory basis for giving any weight to claim rejections for a lack of enablement or written description that are authored by individuals who do not appear to have a level of skill in the relevant arts that is average or better.

Issue 7 - Whether claim 175, claim 176, claim 177, claim 178, claim 179, claim 180, claim 181, claim 182, claim 183, claim 184, claim 185, claim 186, claim 187, claim 188, claim 189, claim 190, claim 191, claim 192, claim 193, claim 194, claim 195, claim 196 and claim 197 are indefinite under 35 U.S.C. 112, second paragraph?

The claims are patentable because the November 12, 2008 Office Actions fails to establish a

prima facie case that the claims are indefinite, because the claim rejections fail to meet the requirements of the APA and because the claim rejections are non statutory.

Reason #1 - As mentioned previously, the first reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that the Examiner has failed to establish a prima facie case that the claims are indefinite under §112 second paragraph. MPEP 2173.02 states that: d*efiniteness of claim language must be analyzed, not in a vacuum, but in light of:*

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001). The arguments presented in the November 12, 2008 Office Action fail to establish the prima facie case required to sustain a §112 second paragraph rejection in at least five ways:

1. By failing to present any evidence that the claims are indefinite. The November 12, 2008 Office Action only contains conclusory statements.

2. By failing to establish that the rejected claims meet any of the well established criteria for indefiniteness. Specifically, the rejected claims do not: (1) recite a means-plus-function limitation without disclosing corresponding structure in the specification; (2) include a numeric limitation without disclosing which of multiple methods of measuring that number should be used; (3) contain a term that is completely dependent on a person's subjective opinion, and/or (4) contain a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable (Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244, 1255,85 USPQ2d 1663 (Fed. Cir. 2008) and Halliburton, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir, 2007).

3. By failing to consider the teachings of the prior art. The terms used in the rejected claims have well recognized meanings, which allow the reader to infer the meaning of the

entire phrase with reasonable confidence. Bancorp Services, L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004).

4. By failing to consider the content of the application disclosure. The metes and bounds of the claims are clearly defined by the specification.

5. By failing to consider the claim interpretation by one possessing the ordinary or average skill in the pertinent art. The relevant Office Action does not contain any evidence that a person of ordinary skill in the pertinent arts would have any confusion about the scope of any of the claims. As described above, it does contain substantial evidence that those authoring the claim rejections do not have an ordinary or average level of skill in the pertinent arts.

Reason #2 - The second reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that the assertions regarding the alleged indefiniteness of the claims are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that the arguments presented in the November 12, 2008 Office Action fail to meet both standards. As detailed under Reason #1, the arguments presented in the November 12, 2008 Office Action fail under the substantial evidence standard.

The Appellant also respectfully submits that a review of the prosecution history of the instant application and similar patents makes it clear that any reliance on the §112 second paragraph rejections presented in the November 12, 2008 Office Action would also fail under the second standard of the APA – the arbitrary and capricious standard. Under that standard, the reviewing court analyzes whether a rational connection exists between the agency's factfindings and its ultimate action. In particular, there is no rational connection between the agency's findings that claim 1 for Pednault is definite:

1. A predictive model method, comprising:
receiving first input data into an initial model to develop an initial model output;
receiving second input data and said initial model output as inputs into a first boosting stage to develop an improvement to said initial model output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof; and
outputting a model output resulting from a final boosting stage being one of: said first

boosting stage; and a final one of boosting stages successively receiving model output data from a preceding boosting stage.

and the rejection of claims 125 (shown below), 133 and 140 for allegedly being indefinite

125. A computer-implemented predictive model method, comprising:
receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed;
receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof; and
receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model
where all input data represents a physical object or substance, and
where said final predictive model supports a regression analysis.

The rejections appear to be completely arbitrary when one considers the fact that the Asset Reliance specification identifies the specific structures used to complete the model development process (i.e. specific predictive models and specific induction algorithms) while Pednault relies on "any of a variety of linear regression methods" and "any technique to develop a basic model". The documented pattern of arbitrarily and capriciously rejecting claims in the Appellant's applications for being indefinite when the claims are similar to claims contained in large company patents can also be observed in the related appeals for applications 09/761,670, 10/750,792 and 11/278,419.

Reason #3 - The third reason that claim 125, claim 126, claim 127, claim 128, claim 129, claim 130, claim 131, claim 132, claim 133, claim 134, claim 135, claim 136, claim 137, claim 138, claim 139, claim 140, claim 141, claim 142, claim 143, claim 144, claim 145, claim 146, claim 147, claim 148, claim 149 and claim 150 are patentable is that there is no statutory basis for giving any weight to claim rejections for an alleged lack of written description that are authored by individuals who do not appear to have a level of skill in the relevant arts that is average or better.

The Appellant respectfully submits that the preceding discussion makes it clear that the

November 12, 2008 Office Action has failed to establish a prima facie case that the rejected claims are indefinite.

8. Conclusion

The Appellant also notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the November 12, 2008 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the November 12, 2008 Office Action for the instant application do provide substantial evidence that: those authoring/signing the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art, those authoring the Office Action do not adhere to any of the well established statutory requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on the use of different standards than those used for the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,
Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President,
Dated: May 8, 2009

9. Claims Appendix

125. A computer-implemented predictive model method, comprising:

receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed;

receiving the input data set from said initial model configuration and a second input data as inputs into a second, induction model stage to develop an improvement to said initial model configuration as an output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof; and

receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model

where all input data represents a physical object or substance, and

where said final predictive model supports a regression analysis.

126. The method of claim 125, wherein said second model stage comprises an induction algorithm that receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output.

127. The method of claim 125, wherein an input data set from said initial model configuration comprises the input data to said initial model configuration after training and model selection is complete.

128. The method of claim 125, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize a predictive model output value for a single criteria or multiple criteria.

129. The method of claim 125, wherein an initial predictive model is selected from the group consisting of CART; projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; MARS; linear regression; and stepwise regression.

130. The method of claim 125, wherein an induction model is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

131. The method of claim 125, wherein the use of a tournament to select a predictive model type eliminates a need for multiple processing stages.

132. The method of claim 125, wherein the final predictive model comprises a transform predictive model.

133. An apparatus to perform a predictive model method, said apparatus comprising:
means for receiving, processing and storing data;
means for completing the three stage predictive model method of claim 125, and
a graphical user interface to allow a user to identify one or more data sources for said predictive modeling method, and to at least one of display, print, and save to one of a printer, a data file, and an application program using the output resulting from the final, third stage model
where said final predictive model supports a regression analysis.

134. The apparatus of claim 133, wherein said second model stage comprises an induction algorithm that receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output.

135. The apparatus of claim 133, wherein an input data set from said initial model configuration comprises the input data to said initial model configuration after training and model selection is complete.

136. The apparatus of claim 133, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality of genetic algorithms to identify a set of one or more changes that will optimize a predictive model output value for a single criteria or multiple criteria.

137. The apparatus of claim 133, wherein an initial predictive model is selected from the group consisting of CART; projection pursuit regression; generalized additive model (GAM), redundant

regression network; boosted Naïve Bayes Regression; MARS; linear regression; and stepwise regression.

138. The apparatus of claim 133, wherein an induction model is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

139. The apparatus of claim 133, wherein the use of a tournament to select a predictive model type eliminates a need for multiple processing stages.

140. A machine-readable medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a predictive model method, comprising:

receiving first input data into a plurality of initial predictive models to develop an initial model configuration by selecting an input data set from the plurality of predictive models using a stepwise regression algorithm after a training of each predictive model type is completed;

receiving the input data set from said initial model configuration as an input into a second, induction model stage to develop an improvement to said initial model configuration as an output; and

receiving said second model stage output as an input into a third predictive model stage to develop and output a final predictive model

where said final predictive model supports a regression analysis.

141. The machine readable medium of claim 140, wherein said second model stage comprises an induction algorithm that receives a second input data and an input data set from the initial model configuration and transforms said inputs into a summary comprising a second stage model output.

142. The machine readable medium of claim 140, wherein an input data set from said initial model configuration comprises the input data to said initial model configuration after training and model selection is complete.

143. The machine readable medium of claim 140, further comprising: using a plurality of independent subpopulations to evolve a plurality of candidate predictive models with a plurality

of genetic algorithms to identify a set of one or more changes that will optimize a predictive model output value for a single criteria or multiple criteria.

144. The machine readable medium of claim 140, wherein an initial predictive model is selected from the group consisting of CART; projection pursuit regression; generalized additive model (GAM), redundant regression network; boosted Naïve Bayes Regression; MARS; linear regression; and stepwise regression.

145. The machine readable medium of claim 140, wherein an induction model is selected from the group consisting of entropy minimization, LaGrange, Bayesian and path analysis.

146. The machine readable medium of claim 140, wherein the use of a tournament to select a predictive model type eliminates a need for multiple processing stages.

147. The machine readable medium of claim 140, wherein the machine readable medium comprises a plurality of intelligent agents.

148. A computing infrastructure, comprising the machine-readable code of claim 140 integrated into the computing apparatus of claim 133, wherein the code in combination with the apparatus is capable of performing the method of claim 125.

149. The computing infrastructure of claim 148, wherein a second model stage transforms one or more data inputs into a summary for use in the final model.

150. The computing infrastructure of claim 148 that is capable of performing the method of claim 138.

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10. Evidence Appendix

Page 36	table comparing the claimed invention and the cited prior art
Pages 37 - 39	declaration under Rule 132 first submitted June 27, 2008

Teaching	10/743,417	Jost	Sandretto
Analysis level	Element	Item	Item
Model type	Causal predictive	Non-causal, neural network	Non causal, discounted cash flow
First model stage	Select input variables using stepwise regression	Reduce an error measure by adjusting weights for different characteristics in a value model	Reduce an error measure by adjusting an input parameter value at the item level in a value model
Second model stage	Identify the best set causal input variables using induction and cross validation	None	None
Third model stage	Use the best set of variables in a plurality of models and select the model with lowest error	None	None

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. :	10/746,673
Applicant :	Jeff S. Eder
Filed :	January 18, 2001
Art Unit ::	3629
Examiner :	Freda Nelson
Docket No. :	AR - 62
Customer No. :	53787

DECLARATION UNDER RULE 132

I, Rick Rauenzahn, do hereby declare and say:

My home address is 529 Calle don Leandro, Espanola, New Mexico; I have a B.S. degree in chemical engineering from Lehigh University, an S.M. degree in chemical engineering from The Massachusetts Institute of Technology and a Ph.D. in chemical engineering from The Massachusetts Institute of Technology;

I have worked in the mathematical modeling field for 25 years, concentrating in the disciplines of fluid mechanics, turbulence modeling, numerical methods for partial differential equations, radiation hydrodynamics, and strength of materials. I also have extensive knowledge of computer system administration, particularly for Windows-based, Linux, and Unix systems; I have been employed by Los Alamos National Laboratory and Molten Metal Technologies for the past 23 years.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I met the inventor for the first time in April 2006. I joined the Technical Advisory Board for Knacta, Inc., a company run by the inventor in May of 2006. I have never discussed this patent application or any of the other patent applications owned by Asset Reliance with the inventor. Knacta, Inc. has a license to the intellectual property associated with this application.

On July 29, 2006, I was given a copy of U.S. Patent Application 10/746,673 entitled "an interactive sales performance management system" filed in the United States Patent Office on December 24, 2003 as well as the cross referenced application 09/940,450, filed August 29, 2001. Until that time I had not read either of these two patent applications. I have studied the entire specification in order to closely analyze the claims and drawings. I am totally familiar with the language of the claims and conversant with the scope thereof. I completely understand the invention as claimed.

Based on my experience and training in the field of mathematical modeling and electronic data processing, I have concluded that it would be straightforward for anyone of average skill in the relevant arts to duplicate the interactive sales performance management system using the information in U.S. Patent Application 10/746,673 together with the patent application it cross-references.

Specifically, U.S. Patent Application 10/746,673 together with the patent application and patent it cross-references fully describes:

1) A performance model that quantifies and impact of a plurality of elements and subelements of value on a value of a business by category of value where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof;

Based on these and other considerations, it is my professional opinion that U.S. Patent Application 10/746,673 together with the patent application and patent it cross-references could be used to recreate and practice a method of and system for interactive sales performance management as claimed.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed.

/Rick M. Rauenzahn/

Rick Rauenzahn
Date: September 27, 2006

11. Related Proceedings Appendix (None)